

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2020



Presented By
Taunton DPW Water Division



Quality First

Once again, we are pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2020. As in years past, we are committed to delivering the best-quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all our water users. Thank you for allowing us the opportunity to serve you and your family.

We encourage you to share your thoughts with us on the information contained in this report. After all, well-informed customers are our best allies.

Where Does My Water Come From?

The drinking water supplied by our system comes from six surface water sources and ground water via two wells. The surface water sources are: Assawompset, Pocksha, Great Quittacus, Little Quittacus, Long (five hydrologically interconnected ponds that are collectively known as the Assawompset Pond Complex), and Elders Pond. All six reservoirs are located in parts of Freetown, Lakeville, Middleborough, and Rochester, Massachusetts. Raw water from these ponds is treated at the Charles J. Rocheleau Water Filtration Plant located in Lakeville. The treated water is then pumped to the distribution system, from which it is either delivered to your home or business or sent to one of five storage facilities around the city. The Prospect Hill Reservoir (22.5 million gallons), East Taunton Elevated Storage Tank (1 million gallons), the Westville Elevated Storage Tank (0.3 million gallons), the Oakland Elevated Storage Tank (0.75 million gallons), and the Myles Standish Industrial Park Elevated Storage Tank (1 million gallons) combined provide more than 25 million gallons of distribution storage. Our system has two interconnections to supply both the Village of North Dighton Water District and the Commonwealth of Massachusetts Bridgewater Correctional Complex with potable water. Our system also has potable water services in parts of Berkley, Lakeville, Middleboro, Norton, and Raynham.

Lead in Home Plumbing

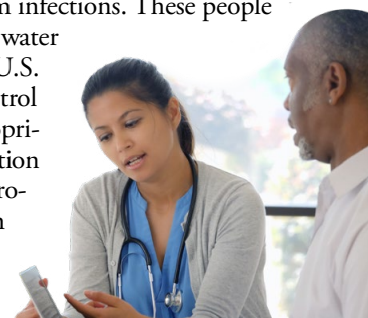
If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.

How Is My Water Treated and Purified?

The surface water treatment process consists of a series of steps. First, water is drawn from Elders Pond, the terminal reservoir of the water supply system. Caustic soda is added as a pretreatment to help increase the alkalinity. An oxidant is added when needed to help remove naturally occurring manganese from the water. Then carbon dioxide gas is added to increase the alkalinity of the water for improved coagulation of sediment. Next, a coagulant (polyaluminum hydroxychloride) is added to cause small particles to clump together (called floc), making them heavy enough to settle into a basin from which the accumulated sediment is removed. The water is then filtered through four 39-inch-deep, anthracite coal-and-sand filter beds to remove any remaining particles. As these smaller suspended particles are removed, the turbidity of the water is greatly reduced and clear water is produced. The water exiting the filters is then run through a UV light system to help reduce the amount of chemical disinfectant required. Next, chloramines are added for disinfection to prevent waterborne diseases and to provide a disinfectant residual as the water travels from the treatment plant through the distribution system and to your home or business. Before leaving the treatment plant, caustic soda (to adjust final pH for corrosion control) and fluoride (to prevent tooth decay) are also added.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please contact Michael Arruda, Water Superintendent, (508) 821-1045. You can also visit our Web site at <https://www.taunton-ma.gov/water-division>.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the Massachusetts Department of Environmental Protection (MADEP) and the U.S. Environmental Protection Agency (U.S. EPA) prescribe regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

“
We remain vigilant in
delivering the best-quality
drinking water
”

What's a Cross-Connection?

Cross-connections that contaminate drinking water distribution lines are a major concern. A cross-connection is formed at any point where a drinking water line connects to equipment (boilers), systems containing chemicals (air-conditioning systems, fire sprinkler systems, irrigation systems), or water sources of questionable quality. Cross-connection contamination can occur when the pressure in the equipment or system is greater than the pressure inside the drinking water line (back pressure). Contamination can also occur when the pressure in the drinking water line drops due to fairly routine occurrences (main breaks, heavy water demand), causing contaminants to be sucked out from the equipment and into the drinking water line (back siphonage).

Outside water taps and garden hoses tend to be the most common sources of cross-connection contamination at home. The garden hose creates a hazard when submerged in a swimming pool or attached to a chemical sprayer for weed killing. Garden hoses that are left lying on the ground may be contaminated by fertilizers, cesspools, or garden chemicals. Improperly installed valves in your toilet could also be a source of cross-connection contamination.

Community water supplies are continuously jeopardized by cross-connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. We have surveyed industrial, commercial, and institutional facilities in the service area to make sure that potential cross-connections are identified and eliminated or protected by a backflow preventer. We also inspect and test backflow preventers to make sure that they provide maximum protection.

For more information on backflow prevention, contact the Safe Drinking Water Hotline at (800) 426-4791.

The Benefits of Fluoridation

Fluoride is a naturally occurring element in many water supplies in trace amounts. In our system, the fluoride level is adjusted to an optimal level averaging 0.7 parts per million (ppm) to improve oral health in children. At this level, it is safe, odorless, colorless, and tasteless. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the U.S. who receive the health and economic benefits of fluoridation.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

We participated in the 4th stage of the U.S. EPA's Unregulated Contaminant Monitoring Rule (UCMR4) program by performing additional tests on our drinking water. UCMR4 sampling benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality. Unregulated contaminant monitoring data are available to the public, so please feel free to contact us if you are interested in obtaining that information. If you would like more information on the U.S. EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.



Definitions

90th %ile: Out of every 10 homes sampled, 9 were at or below this level. This number is compared to the Action Level to determine lead and copper compliance.

AL (Action Level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

SMCL (Secondary Maximum Contaminant Level): These standards are developed to protect aesthetic qualities of drinking water and are not health based.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloramines (ppm)	2020	[4]	[4]	2.07	1.03–2.43	No	Water additive used to control microbes
Fluoride (ppm)	2020	4	4	0.72	0.50–0.72	No	Water additive that promotes strong teeth
Haloacetic Acids [HAAs] (ppb)	2020	60	NA	30.28	0–57	No	By-product of drinking water disinfection
Perchlorate (ppb)	2020	2	NA	0.09	0.09–0.09	No	Inorganic chemicals used as oxidizers in solid propellants for rockets, missiles, fireworks, and explosives
TTHMs [Total Trihalomethanes] (ppb)	2020	80	NA	42.94	28–61	No	By-product of drinking water disinfection
Turbidity ¹ (NTU)	2020	TT	NA	0.36	0.01–0.36	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2020	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community.

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.08	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2020	15	0	2	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	MCLG	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2020	200	NA	17	0–63	No	Erosion of natural deposits; Residual from some surface water treatment processes
Color (Units)	2020	15	NA	2	0–9	No	Naturally occurring organic materials
Iron (ppb)	2020	300	NA	20	0–50	No	Leaching from natural deposits; Industrial wastes
Manganese (ppb)	2020	50	NA	13	0–50	No	Leaching from natural deposits

UNREGULATED SUBSTANCES ²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Bromodichloromethane (ppb)	2020	3.5	3.5–3.5	Disinfectant by-product; Marine micro-algae
Chlorodibromomethane (ppb)	2020	0.0	0.0–0.0	Disinfectant by-product; Chemical intermediate
Chloroform (ppb)	2020	11.7	11.7–11.7	Disinfectant by-product; Chemical intermediate
Sodium ³ (ppm)	2020	42.0	42.0–42.0	Erosion of natural deposits; Soil runoff

¹ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

² Unregulated contaminants are those for which the U.S. EPA has not established drinking water standards. The purpose of monitoring unregulated contaminants is to assist the EPA in determining their occurrence in drinking water and whether future regulation is warranted.

³ The Massachusetts Department of Environmental Protection maintains a guideline level of 20 ppm for sodium.

UNREGULATED CONTAMINANT MONITORING RULE - PART 4 (UCMR4) ²

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
HAA6Br (ppb)	2019	1.85	0.31–4.09	Disinfection by-product
HAA9 (ppb)	2019	13.88	0.37–24.2	Disinfection by-product
Manganese (ppb)	2019	7.12	4.93–9.34	Erosion of natural deposits; soil runoff
Total Organic Carbon [TOC] (ppb)	2019	4,385	4,340–4,430	Naturally occurring from decaying organic matter

The Benefits of Fluoridation

Fluoride is a naturally occurring element in many water supplies in trace amounts. In our system, the fluoride level is adjusted to an optimal level averaging 0.7 parts per million (ppm) to improve oral health in children. At this level, it is safe, odorless, colorless, and tasteless. There are over 3.9 million people in 140 Massachusetts water systems and 184 million people in the U.S. who receive the health and economic benefits of fluoridation.

Source Water Assessment and Protection Program

In September 2002, the Massachusetts Department of Environmental Protection (MADEP) completed a Source Water Assessment and Protection Program Report (SWAP) for the City of Taunton's public water system. The Source Water Assessment and Protection Program, established under the federal Safe Drinking Water Act, requires every state to (1) inventory land uses within the recharge areas of all public water supply sources, (2) assess the susceptibility of drinking water sources to contamination from these land uses, and (3) publicize the results to provide support for improved protection.

The Taunton Water System was assigned a susceptibility ranking of high based on the MADEP assessment of potential pollution sources in our watershed. It is important to understand that this susceptibility ranking does not imply poor water quality, only the system's potential to become contaminated within the assessment area. These threats include a variety of land uses, such as cranberry bogs, horse farms, transportation corridors (local roads and highways), and septic systems/cesspools. The SWAP report is available at the Taunton DPW Water Division, 90 Ingell Street, Taunton, Massachusetts, 02780, and online at <http://www.mass.gov/lists/source-water-assessment-and-protection-swap-program-documents>

In light of our system's ranking, we currently participate in several programs to protect our water supply. We are voting members of the APC Management Committee, a group of the abutting communities and state officials who meet quarterly to manage and protect the Assawompset Pond Complex. We also actively review and comment on all permitted activities within 400 feet of any of our source waters. We regularly patrol the ponds in cooperation with other APC members to protect the integrity of the APC itself. For more information, contact Michael Arruda, Water Superintendent, at (508) 821-1045.

